GEELONG NATURALIST

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MUSEUM VICTORIA
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December 2003

CLUB NOTICES

Tonight's meeting ...
is a 'Members' Night' and our Xmas break-up.
Mark Trengove, who owns and runs the Geelong Indigenous Nursery and is a re-elected CCMA board member, will speak on the role of his position and would like to hear your input about the Barwon River.

February's speaker will be...
Dr Tim O'Hara, his subject will be 'Marine Biodiversity.'

Tim is a senior curator of marine invertebrates at Museum Victoria in Melbourne, Australia.

His main interests are in the biogeography and ecology of marine organisms, understanding why animals live where they do. This data is required by Australian Governments in order to effectively protect and manage our marine environment.

His favourite marine animals are echinoderms (sea stars, brittle stars, sea urchins etc). On the NORFANZ expedition, Tim will assist in the sorting, preliminary identification and preservation of invertebrates as they are brought onto the trawl deck. The real work for Tim will begin back at the Museum after the cruise finishes, when thousands of small brittle stars will be examined under the microscope and identified to species.

[*The above information was found on the Melbourne Museum website.*]

Club (half-day) Excursion Barwon River Aqueduct Saturday, January 17, 2004

Leader: Ray Baverstock (5243 7025)

8.50 am: Meet at Clairvaux, sign attendance book and organise transport.

9.00 am: (prompt) departure.
OR alternatively meet at
9.10 am at the laneway leading to the Aqueduct in Leather Street, Breakwater, opposite the Doona Factory.

Please observe the parking restrictions.

Hopefully we will be able to reach the river. We will **not** be walking on the Aqueduct which is closed.

Suggested footwear—**Rubber Boots!**

Changes to Program Activities in March, 2004

The Labour Day weekend campout at Princetown, organised by the Southeastern Australian Field Naturalists Association (formerly VFNCA), was incorrectly scheduled in the program.

The Princetown campout will be from March 5–8, 2004

Apologies to those inconvenienced by this mistake.

The Mud Island Trip,
Planned for March 6th, will be postponed, as a number of members want to go to both activities. It will probably now go ahead in October/November, 2004.

Watch this space!

Picture on the front cover—by Valda Dedman
Crossing the Moorabool—Club Excursion
November 15, 2003

President's Corner
December 2003

...Diana Primrose

New Committee member!

Who would believe we would finish the (calendar) year with a full committee (apart from an ex-officio president – only because we hadn't had a president for a couple of years)! The Committee has the power to co-opt members throughout the Club year should a vacancy exist. So – we are really pleased to welcome Rosalind Smallwood 'on board' and wish her an interesting, satisfying time with the Committee, and of course we look forward to her help! Welcome Rosalind!

Geelong Botanic Gardens Venue.

Members will remember that we held our Christmas meeting last year at the GBG – to enjoy the area and gauge the feelings of members to our proposed future meeting place. General reaction was very positive, keeping in mind that the current buildings are temporary, with the main concerns being limited space and a problem car park.

It is pleasing to see that some land fill is at last going into the car park area – so things are happening! Progress with the enlargement of the current temporary premises is being made behind the scenes. Hopefully we will see things really move early next year.

New Members

The monthly Treasurer's report shows the Club has had thirteen new members join since April – a very warm welcome to you all! I have been rather remiss in forgetting to give a special welcome to new members at our General Meetings. Be assured – you are most welcome and we hope you will have a long and satisfying association with our Club and become involved in its many activities. I am sure you will find us a very agreeable lot! One thing that has impressed me personally over the years is the willingness of members to pass on their knowledge to others.

Visitors, of course, are very welcome also. Please come along and see if our Club is what you are looking for – we will be very pleased if you choose to join us as members!

Christmas again!

Another year whistles by and it remains for me, on behalf of your Committee, to wish you all a very happy and safe Festive Season, enjoying a rest from the normal run of things, and coming back next year full of 'get up and go' for the year ahead!

A Happy Christmas to you all!

Out and About

...Valda Dedman

It seems I invented a word *fiercesome,* just as I invented that dragon last month, which, as I expect you all knew, was nothing more than the rear end of a caterpillar, which was trying to look fierce, with its pattern of mouth and eyes and its great spines, to frighten off predators. Imagine if you were a small beetle or even a little bird coming 'face to face' with that creature.

The caterpillar was a hairy Pterolocera which was found on grass along the Bellarine Rail Trail just east of Hermsley Road. It was probably *P. amplicornis* (=great horned) though its fake horns were not particularly evident. This caterpillar has been found regularly in grassland to the north of Melbourne and, if it is a male, becomes a handsome buff-coloured silky moth with brown markings and a furry head. The female is a poor wingless hairy brown thing, that attracts a mate with pheromones. The males fly very fast on a zigzag path about 10 metres wide, hoping to pick up a female's scent with their big feathery antennae.

Another defensive tactic the caterpillar used was to roll itself in a ball, presenting a circle of hairs. The hairs can be moved individually, too. They help the caterpillar feel, just like a cat uses its whiskers. Even the smoothest caterpillars have some hairs, which are often connected to receptor organs beneath the skin. They can even hear low-frequency sounds with them.

Caterpillars secrete silk through an aperture on their bottom lip.

Caterpillars, being insects, have six legs which are on the first three of their 13 body segments. They have a pair of anal claspers on the last body segment. They walk on their fat and spongy prolegs, which have hooks on their tips which help them cling to almost any surface.

Caterpillar prolegs are an aid to identification, for the number of pairs varies, as does their position on the body segments and the number of hooks they contain. The claws on their true legs are using for manipulating food.

Consider the lilies of the field.

Did you notice that the wet naturalists in the photo of the last Club excursion (p. 6 *Glg Nat* vol 39, no. 7) were keeping company in the cemetery with hundreds of Milkmaids? Dairymaids were traditionally supposed to have a creamy complexion like the flowers scattered among the grass. *Burchardia umbellata* was more prosaically named after a German botanist J. H. Burckhard (1676-1838) and is one of the very numerous lily family. Our native lilies often grow in profusion, forming spectacular wildflower carpets in spring. They come in mauve or purple— fringe lilies, vanilla or chocolate (smell them!), gold—yellow stars and bulbine lilies, blue—squills and grass-lilies, black-anther flax lilies, and the white of Early Nancies and Milkmaids.

What makes a lily a lily? It is a perennial herb, its flowers are bisexual with three petals and three sepals, and six stamens. Its ovary is superior. That means that the seed pod develops *above* the petals, unlike an orchid, whose ovary is *below* the flower parts.

And did you know that Grape Hyacinths are really lilies? And so is Asparagus (the edible sort) and its nasty cousin *A. asparagoides* that Claire Greenwell wrote about last month.

What happened to the Wattles?

The Wattlebark Commission has supplied the Railway Department with nearly two hundredweight of first-class wattle seed for planting reserves at Lara along Cowie's Creek, and along the railway line to Colac. During the last fortnight, more than 100 acres have been ploughed and this area is now ready for the reception of seed.
Geelong Advertiser November 1878.

The Wattle Bark Board of Inquiry was set up in Victoria to investigate the decline of wattles for the tanning industry. There were 96 tanneries operating at the time, including several along the Barwon in Geelong, and they needed 12 000 to 15 000 tonnes of bark annually. Golden Wattle *Acacia pycnantha* and Black Wattle *A. mearnsii* were the most widely used with Black Wattle being favoured because of its larger size, rapid growth and ease of stripping.

The first full shipment of wattle bark exported from Australia was in 1835, from Westernport, and the bark was stripped by men who came over from Launceston in 1834. Bark for tanning meant money. John Pascoe Fawkner, who was not afraid of hard work and was quick to take any opportunity to make some cash, started 'barking' around Melbourne when he first arrived there. His diary for 24 November 1835 records that after a storm of thunder and rain he, with three other white men and the two aboriginals, Derrimert and Dallah Kalkeith, 'commenced stripping bark, about 4 miles off'. By 2 December 180 bundles had been tied up and carted, and the work went on day after day whenever he or his men had time. On 6 February he reports 'Jem at the Bark Chopping Machine', which he had specially made for him by Wimberry, who was building Batman's house.

Wattle bark was often stripped by itinerant workers going into the bush ahead of settlers, and selectors sometimes stripped bark on their own and adjacent Crown lands to help pay off their land purchases and meet the clearing requirements of the Land Act. By

1878 the once plentiful resource was becoming scarce. Smaller and smaller trees were being stripped and work continued right through the year, instead of just over the summer months when the tannin content was highest.

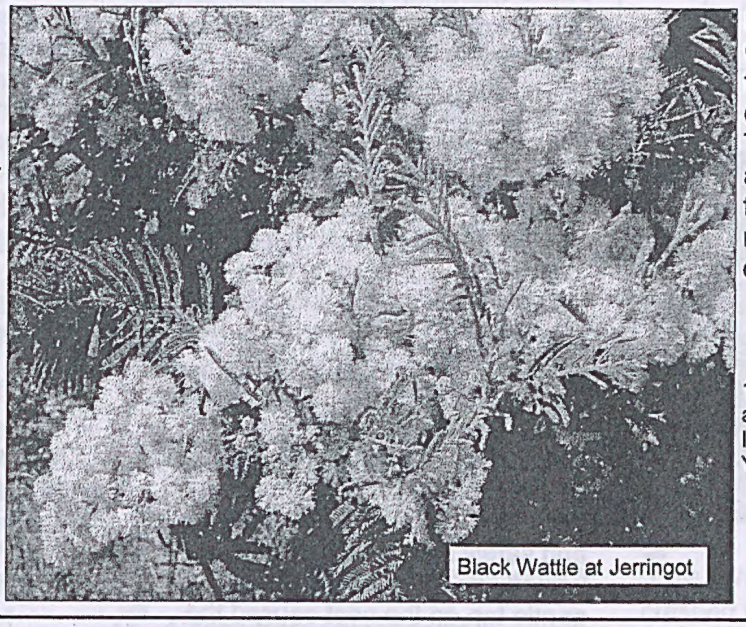
The Board recommended tighter controls on bark strippers and the size of trees to be stripped and suggested that wattles be grown along main roads, railway lines and on all lands that were not needed for other purposes, as well as on certain other areas of 'poor land' which would be leased for ten years or more as 'wattle farms'.

Action was obviously swift in the Geelong area, although it was not until 1889 that the Wattle Trees Cultivation Act came into force and the Wattles Act followed in 1890. Between 1884 and 1914 thousands of Black and Golden Wattles for tan bark were planted at the You Yangs. In 1887 131 ha. of wattles were planted and 'Their bark and fuel yielded very handsome returns, with the Government receiving over 1,500 pounds at different times from the sale of stripping rights'[1]. Wattle plantations were established as late as 1928, when the Forests Commission reported that *A. pycnantha* had been established at the You Yangs and at Kentbruck, and *A. mearnsii* planted in the Victoria Valley in the Grampians.

It is ironical that 1884 was the year the chromium salts process of tanning was invented. Even then the Australian wattle bark industry had been largely replaced by imports of *A. mearnsii* tannin extract. Our own wattles were so extensively grown overseas that a huge industry had grown up in countries such as South Africa where labour was cheap. Finally, by the early 1970s the Australian wattle bark industry was dead.

There is however a resurgence of interest in the use of wattle tannin in adhesives in the production of composite board. Overseas Black Wattle wood is used for firewood, charcoal, poles and fence droppers, parquetry, paper pulp and rayon and curing tobacco. The leaves as utilised as green manure, while the trees themselves are planted to control soil erosion and increase soil nitrogen. In 1985 Australian and Chinese scientists were working together on *A. mearnsii* plantations in China.

But I'm intrigued with those 1878 plantings. How many of the Black Wattles we see along our roadsides and in our rail and other reserves are the offspring of deliberate plantings? Two hundredweight of seed is more than 100 kg. That's a lot of trees. I have read that Black Wattle seed may remain viable for 100 years, even though the trees may be short-lived—perhaps only 15–30 years.



Black Wattle at Jerringot

Black Wattles around Geelong have been flowering prolifically during the past month. The pale yellow balls among the feathery foliage will soon be replaced by long brown developing seed pods.

1. Searle, S.(1991). The rise and demise of the Black Wattle Industry in Australia, CSIRO, Yarralumla.

Plant Group Report
...Dick Southcombe

Plants of Bunyip State Park, grassland plants of the volcanic plains, a Geraniaceae species from a Belmont garden and a Waxflower from a Grovedale garden were discussed, referred to literature and debated at our November meeting. A scientific examination of the waxflowers' intruder is reported below and the judge has not yet advised his decision on the wayward geranium.

A specimen of the Bendigo [*Fairy*] Wax-*flower,* Philotheca verrucosa, *was shown having extensive contamination of black mould. This mould was the result of a severe attack upon the shrub by a scale insect of the family Coccidae, probably a* Ceroplastes *genus.*
The insect attaches to the stems and leaves, feeding upon the plant's sap, by means of inserting their stylet form of mouthparts and sucking up the liquid. Excretion is in the form of a sugary liquid that covers the plant epidermis. This sugary coating attracts a black mould. The whole process can be very debilitating for the host plant, by reducing the flow of nutrients to the leaves and reducing the photosynthesis and photorespiration processes.
[Thank you, Dave.]

December meeting
According to custom, we will visit a special area and enjoy a picnic tea together on December 9.

Please meet at Geelong Botanic Gardens meeting room at 4.00 pm when Don Foreman will explain the project he is currently working on before taking us on a tour to learn about some of GBGs special plants. Don co-edited Vol 1 *Flora of Victoria* and now practises as a Horticultural Botanist at Lara. Club members who often join us in December and anyone who has an interest, are invited to attend this year's special visit.

These Months

...Joe Hubbard

Change of title? The diary covers December through to January. If you want to find the Sickle Orchids and visit a native grassland, act now!

Vignette 1
Reedy Lake
Uncompromising wind; low water; reed bed to reed bed birds; wonderful mixed flights, black of Swans, white of Great Egrets; seventy Great Egrets resting together; Marsh Sandpipers, dainty version of the Greenshank, white-rumped in flight; Sharp-tailed and Curlew Sandpipers; nervous Glossy Ibis primeval in silhouetted flight; overflights of Swamp Harrier and Brown Falcon.

Vignette 2
Fyansford
Great (Black) Cormorants sitting in a dead tree. Little Black Cormorant, like a cassocked priest, arms outspread. A Little Pied Cormorant, close up.

Backwater, among green pads and water ribbons, a pair of Moorhens, nest building, one constructing—the other fetching.

Herons, White-faced and Rufous Night, rock sitters.

Sweet Bursaria and Purple Loosestrife flowering. Fresh green wattles, attractive reddish-brown seed pods.

Mistletoe—dainty red flowers with yellow stamens.

Unexpected pleasures
Enfield
It's not often you would want to describe a Greenhood Orchid as flamboyant, but when we stopped the car to check the 'white' flowers, we were surprised and pretty happy, to see Greenhoods in great numbers, tall, up to 30 cm, with long flowers of 6 cm, and flamboyant! These were Sickle Greenhoods growing either side of a culvert in swamp conditions.

With them was a colony of Common Bird Orchids with a few late flowers. I thought I had discovered a taller species but found out later that these orchids, after pollination grow a tall stem to assist seed dispersal.

At home in this damp spot were a Veronica, a pink Caladenia (of the Pink Fingers complex) and what I thought was a White Purslane, five white petalled flowers attended by many tiny wasps.

In the Bracken Fern a couple of White-eared Honeyeaters wondered what all the fuss was about.

Invitation to a spider's ball
Hospital Lake
Couldn't work out the light coloured ducks on the lake—had to ask. Silly me—Avocets. Well, they appeared to be swimming!

No trouble with the Black-winged Stilts wading and resting on the bank. Both Stilts and Avocets were put to flight by a Swamp Harrier. The Stilts put on a great display of evasive, defensive formation flying—the flock seemed to become one creature—swirling into ever-changing congruous shapes.

Retracing our steps I found a spider's nest attached to a low rush, filmy outer wall of fine web, and safely inside—a ball of spiderlings, 20 cent coin size. A gentle tap on the nest caused the ball to dissolve into hundreds of tiny spiders.

Down among the Red Gums
You Yangs
Searching for Rainbows was interspersed with admiring the Red Gums covered with blossom—some are ancient warriors—and making the most of other bird life.

Jackie Winters and a male White-winged Triller were quickly noted. We heard the call of a Sacred Kingfisher and then the distinctive chirring of Rainbow Bee-eaters. Soon saw one perched on a fallen tree, bare branches, with a catch in beak. Our first sighting for the season (a bit late mind you!)

Then there was a tantalising glimpse of a possum-like creature sunning at a hollow entrance. Yes, probably one of those! Always pays to check hollows—cautiously!

Along Sandy Creek Road you can expect to find Sticky Everlastings and Lemon Beauty-heads—yellow amongst the dry grass.

Summer nights
Newstead
Spotlit! Barking Owl. Bats like laarge moths flying through the light-beams, frogs, a bonking chorus from the freshly-filled creek pools.

Lights off. Stars so close we could reach through the darkness to touch them—magic!

Puzzlement 1
Newstead
'Have a look at the moth on the window.' There it was—a wonderful example of camouflage. Two wings like dry thin gum leaves with curled up edges and caterpillar damage, and an abdomen curved like a thick stem.

'Was it real?' It looked too good to be true—just a child's plastic toy critter. A delicate touch, a flicker of wings, then still.

Photography over, I placed it on a tree trunk. After some wing-waving it turned so the straight edges of its wings aligned with the bark fissues.

Puzzlement 2
Newstead
It startled me for a moment—this strange creature lying on the edge of the bush road. I had to look closely to make out the two large, light grey Wood Moths, mating tail to tail. So perfect was their configuration that they seemed to merge into one entity, 15 cm in length, and a puzzle to the casual observer.

What's your Hobby?
Newtown
On the antenna, preening its wind-ruffled feathers, it stretched upwards showing yellow legs, then fanned its tail—lovely rufous bars highlighted by the low sun.

Then each wing was stretched and in turn fanned over and around the tail.

Suddenly it became alert—the tension seemed to flow through its body even to the feathers which slicked together.

It was the hunter again!

***

Morning coffee and watching the Silvereyes nest building in the climbing rose over the back windows.

Alarm calls from the New Hollands.

There!

Seemingly hanging from the foliage of the Golden Poplar was a Hobby. A cicada flew and the Hobby tumbled into a pursuit of a few metres. Then it flew off with the cicada clutched in its talons.

Huntsman? Pirate?
Limeburners Bay
Rubbish Tips and Silver Gulls—we know the bad news! There were thousands, most on the water, but hundreds moving around. At times we felt we had a ceiling of gulls—there were so many.

I don't know how I managed to notice the slim winged black bird amongst all this but there it was. Binoculars on to it and it became dark brown with a suggestion of white under the wing-tips. Great Skua? Not big enough and not supposed to be here in summer. Could be a Jaeger? It was certainly piratical in acquiring its food.

What's common, shiny and itches?
Brisbane Ranges
'Don't handle That!'
I was always told that. Probably good advice as Dogwood, or Mountain Itch, has a bad reputation.

Cassinia, as they are properly known, put on a show when you travel through the ranges.

Two species, Common and Shiny, make up the crowd. These tall shrubs carry clusters of minute white or pale yellow flowers.

To get you going...
Reedy Lake. Access from Moolap Station Road. Melways 467 F4. Rubber boots! Brolgas a chance. You can lose yourself quite easily in the reed beds!

Enfield. Do your own research! Check last month's article for clues and don't get grubby. Roadside grasslands still worth a look. Blue Devils, Kangaroo Grass.

Hospital Lake, Hospital Swamps Road, Melways 481 F6. Note adjacent Private Property.

You Yangs, Sandy Creek Road, west side of these. Walk west from road through plantation. Look for entrance and track—convenient! Stop at boundary fence—Hovells Creek in view. Good birding spot. For something different, walk south along creek bed (if dry). Retrace steps!

Fyansford. Great walks, good paths, pub. Walks follow Barwon and Moorabool rivers. Possible sightings of Nankeen Night Heron, Darter. Melways 451 A2.

Limeburners Bay. Maybe Black Kites, Whistling Kites, Mangroves. Melways 432 K7. Start located between Geelong Grammar School and Corio Bay.

A card from Queenscliff...
'That's the cutest thing!'

Cup of tea on the clifftop with the Magpie Family Carollers. Mum, Junior in the middle, and Dad, stood in line just about under our feet and gave us the best carols—without the candles of course.

This was going to be the cue for Val and I to carol 'We wish you a merry...' but we didn't want to upstage the Magpies.

At any rate, best wishes and good health.

Cheers!

Seaview Park
...Dick Southcombe

Thanks are due to members and an industrious helper who removed weeds and planted out tube-stock on November 7 & 8, and on the 12th gave the plants a watering.

Steady rain on the 22nd has helped considerably, but further watering may be needed. Please let me know if you are able to help and I will give you a call when necessary.

And also...When the Kangaroo Grass is ready to harvest—from mid-December—Polly Cutcliffe would appreciate some help with cutting and collecting.

This lovely Sacred Kingfisher crashed into Barry Lingham's window—sat on the floor boards long enough for him to take the photograph above—then flew off into a nearby eucalypt!

A Rare Find in the OGNR

...Dave King
216/86 Church St. Grovedale, 3216
kingdf@optusnet.com.au

Introduction

Whilst on Voluntary Warden duty at the Ocean Grove Nature Reserve, on 1st November, 2003, I undertook to make a tour of inspection.

Taking a short cut through the bush provided a fortunate sighting of some interesting fungi. One of these fungi appeared to have a definite green hue to its cap. Close inspection revealed it to be an agaric with gills olive green. Immediate impression was that it had a covering of algae. This, however, could not be sustained because the life span of the fruiting body is too short for algae to develop such a noticeable effect.

It was, therefore, decided to collect the specimen for further study and determine the species identity. This resulted in determining it to be the very rare Amanita chlorophylla (Gk Amanita, mushroom; chlora, green; phylla, gills)—confirmed by Tom May, of the Melbourne Botanic Gardens. Auto-digestion commenced some 48 hours after collection, so it was a rare opportunity to obtain a record of this species.

Description

Cap – Convex, slight greenish hue, flesh white, 120 mm diameter.

Gills – Close together, olive green, adnexed. A section cut through the gills revealed the centre of the lamella to be green, whilst the surface layer of cells were white.

Stem – Robust with slight greenish hue. Diameter at attachment to the cap 25 mm, increasing to 40 mm diameter at soil level, then decreasing in a blunt conical form. Total length 80 mm.

Spores – White.

Taste & smell – Much the same as that of the Common Field Mushroom.

Toxicity – Writer not prepared to determine this characteristic.

Habitat – Closed woodland of Allocasuarina and Acacia, with ground cover of grass and sedge. Soil, a red clay duplex, Northcote Primary Profile Form Dr 1.12 (Northcote, 1979).

References

Fungimap (2001), *Compendium of Fungimap Target Species,* Version 1.0 (CD-ROM) Fungimap, Melbourne

Fuhrer, B. (1985), *A Field Companion to Australian Fungi,* F.N.C.V., Melbourne

Northcote, K.H. (1979), *A Factual Key for the Recognition of Australian Soils,* Rellim, Adelaide

Mammal Trapping
...Trevor Pescott

Torquay–Pt Impossible

GPS 38°18.72S, 144°21.71E NRE Permit No. 10002127

The Torquay–Pt Impossible sand dune complex contains an area of remnant Coastal Moonah Woodland.

An unsealed road, the Esplanade extension, runs through the woodland to a car park which services White's Beach, also known as Torquay–Pt Impossible Beach.

The Sands golf course has been developed inland of the woodland, and many of the mature Moonah trees are on land belonging to, but not developed by, the Sands developers.

The road also provides access to the Sands large machinery and works depot.

Trapping was done adjacent to the road but on the seaward side opposite the Sands property.

The vegetation is dominated by Coast Beard-heath, but with a mix of Coast Wattle, Wirilda Wattle, Coast Teatree, Coast Everlasting and some Moonah. Ground cover includes Coast Sword-sedge, Poa tussocks and some other grasses and forbs.

Weather: cold, very cold long-shore wind, some heavy rain showers...

Dates: 8–11 October 2003

30 Elliott traps on 3 nights, (i.e. 90 trap-nights) and checked in both morning and late afternoon. They were set in a single meandering line.
Bait: peanut butter, honey and oatmeal.

Results:
8.10.03 afternoon set traps.
9.10.03 morning nil.
afternoon 1 House Mouse *Mus musculus*.
10.10.03 morning 2 House Mice
afternoon 4 House Mice
11.10.03 morning 7 House Mice, 1 Black Rat *Rattus rattus*
Total: 15 animals, 16.7% trap rate.

Other mammals recorded:
- European Rabbit: fresh scats.
- Red Fox: fresh scats.

The House Mice were sandy-brown in colour, presumably an adaptation to the coastal environment.

They were active both at night and during the day, with 5 of the 14 found in the afternoon check of the traps.

Measurements (averages): head-body 82 mm
tail 78 mm

Other fauna
- Eastern Three-lined Skink, 1 under a sheet of iron.
- Pobblebonk Frog, 1 under debris, one dead on road.

Birds:
Pacific Black Duck
Little Eagle
Brown Falcon
Nankeen Kestrel
Pacific Gull
Silver Gull
Caspian Tern
Spotted Turtle-Dove
Superb Fairy-wren
White-browed Scrubwren
Spiny-cheeked Honeyeater
Singing Honeyeater
Grey Fantail
Willie Wagtail
Australian Magpie
Welcome Swallow
(Fairy?) Martin
Silvereye
Common Blackbird

The next trapping is on the following dates.

Wednesday 17th December
5.00 pm set traps
Thursday 18th December
8.00 am check, 5.00 pm check
Friday 19th December
8.00 am check, 5.00 pm check
Saturday 20th December
8.00 am check and collect traps.

The locality is JINDA PARK
485 Bambra–Airey's Inlet Road
Bambra.

For additional details, phone Trevor on 5243 4368, email pescott@pipeline.com.au

Biodiversity Group
...Claire Greenwell

Our group had a lively discussion on 3 tiny insects collected from Malmsbury (near the Viaduct and Gardens). One was red and black, another iridescent copper and the other greyish black.

Dave King has advised me that the small beetles are from the super family Cucujoidea, the larger black one is a Tenebrionidae. The two specimens over which most discussion occurred are Stoneflies, Plecoptera. Probably family Gripoptereryidae, genus Leptoperla. This is a large genus, many of which are undescribed. Found from Tasmania to Queensland, emerging in early spring.

We also had a look at Frank's burrowing cockroach and a tick—similar to the ones that he gave to the pathologist at Geelong Hospital who is researching Rickettsia—a disease transmitted to humans by the Southern Reptile Tick, *Aponomma hydrosauri.*
Recombinant DNA methods are being used to find a vaccine.
(Nothing to do with parasites being **'recumbiant'**—see last report!)

Geoff Jones reported that he had attended the Bellarine Peninsula Community Frog Monitoring Program training night.

Anyone interested in participating should contact Steve Smithyman, Swan Bay Catchment Management Committee on 5229 8432
or mobile 0417 231853
— registration is essential.

Have a safe summer break—see you after 'bah humbug' goes away.

Night life in the Dandenong & the Otway Ranges—an illustrated talk given at the General Meeting—4 November, 2003 by Ed McNabb

...Roy Whiteside

Ed McNabb's specialty is the study of nocturnal predators. He is well known as an environmental consultant and lecturer, with a legendary enthusiasm and knowledge of nocturnal fauna. His current work at Arthur Ryler Institute involves leading teams of field biologists to study owls throughout Victoria, using the results to help predict distribution and select areas of forest for special protection.

Ed's studies of the fauna in the Dandenong Ranges led him to pioneer the technique by which predator calls are used to elicit responses from predator and prey species, allowing the detection of a wide range of faunal species without trapping or spotlighting. He frequently lectures to biology and geography students about his studies and innovative approaches to nocturnal fauna, and has conducted interpretative programs in Victoria's parks over many years. His sound recordings and photographs illustrate the many lectures and talks he gives, and are widely used by other biologists in the identification and assessment of nocturnal fauna. Ed has twenty years experience in banding birds, especially Powerful Owls, and has successfully undertaken the unique rehabilitation of an orphaned Powerful Owl. He has skills in radio-tracking and has recently conducted novel research on movements of Masked Owls in western Victoria.

Synopsis
The talk dealt with some of the nocturnal fauna that the speaker has experienced in the wonderful habitat of the Dandenongs where he lives. There was also reference to some of the fauna of the Otways from where the speaker had just returned. There was an emphasis on the importance of the retention of tree hollows as a habitat for most of the nocturnal fauna. Much of our forests are under a lot of pressure at different times from logging and clearing. The talk was illustrated with the author's excellent slides and sound recordings.

The talk commenced with the familiar **Kookaburra** song at end of the day with reference to an observation of seven birds on the same bough of a tree. This was followed by the peaceful night call of the **Southern Boobook** (or Mopoke) which is the most widespread and common of the Australian owl species. It is a hunter of many fauna species such as Bush Rat, Swamp Rat, Agile (Brown) Antechinus, Dusky Antechinus and Lesser Long-eared bat. Hollow trees provide a perfect daytime shelter, e.g. a 500 year old Mountain Grey Gum in Ferntree Gully. The Boobook is sometimes found roosting in daytime in the head of a tree-fern and in shady gullies. This bird nests in Victoria in the summer and in the Dandenongs the young emerge around New Year's Day. Recordings were played of the begging call of a fledgling and the double hoot 'boo-book' sound of an adult.

Common Ringtailed Possum
These thrive well in forests with old hollows and where hollows are not available they can build drays of bark or grasses. Brown Goshawks are known to sometimes flush out these animals from their drays. This possum has been seen to be taken by a Boobook Owl. The gentle call of this possum was played.

Common Brushtail Possum
A female was shown with a young one on its back. These possums have long pointy ears and a pointy little snout. They like the hollows in trees but if these are unavailable they will try to get into man-made hollows. The call of this species is quite fierce sounding. They sometimes like to sleep in the head of a tree-fern.

Mountain Brushtail Possum
The Victorian species is known as the **Bobuck** or *Tricosaurus cunninghamii.* Its call is distinctly different from the Queensland species, *T.caninus* and is somewhat difficult to distinguish from the Common Brushtail except for its rounded ears. A picture was shown of a female with a young one on its back. They also like to sleep in the head of tree-ferns.

Leadbeater's Possum
(The Victorian mammal emblem). These frequent Mountain Ash forests and like to use hollows in large old dead trees that were killed in the 1939 fires and other fires. These are the areas where the main heartland occurs for this species. Their call is a rustling sound.

Sugar Glider
This animal tends to be fairly shy and frisky and has the capacity to glide from tree to tree. Its presence is more likely to be recognised from its dog-like yapping call than from it being seen. A picture was taken in the Yarra Valley Parklands near Doncaster. A large quantity of bark had been shredded from a Stringy-bark eucalypt at Kurth Kiln Park near Gembrook. There were many scars on the tree from which sap had been oozing. The call of this species is a gurgling sound.

Yellow-bellied Glider
This species is doing very well in the Otways. These animals respond well to play-backs of their recorded sounds. The speaker successfully used this technique at the Grey River Reserve near Kennett River which nearly resulted in the animal landing on him. These gliders have been observed to harass Powerful Owls sitting on a branch. In research work at the Arthur Rhylah Institute, these gliders have been detected recently in a number of areas of Gippsland and the highlands where previously they had not

been seen. They are largely a sap feeder and leave scars on trees as they chew through the bark into the cambium layer. The sap oozes out and a family of gliders returns to the same tree on a regular basis.

Greater Glider
A photograph was shown of one of these animals in a tree hollow in the Dandenongs. The eye-shine makes them easy to detect by spotlight. They do not seem to make any significant sounds. Greater Gliders were seen in the same hollow as the Boobook described earlier. They do well in old growth forests.

Powerful Owl
This is the largest owl in Australia and can take Greater Gliders. It is an impressive bird and makes birding at night well worthwhile. The call is a woo – woo. The male call is deep pitched, very soft and fairly slow whilst the female call is usually higher pitched. The wing area is very large, giving the bird plenty of lift for carrying heavy weights. This owl weighs between 1.3 and 1.7 kg. In Victoria mating occurs in late autumn or early winter. A pair establishes a close bond with each other. The male is usually in charge of the food and will pass pieces of possum etc. to the female after he has fed himself. The young are ready to fledge in early September and if they accidentally land on the ground they are very vulnerable to being taken by foxes or cats. The fledglings are dependent on their parents for up to seven months from hatching. Sound recordings were played of fledglings and of an adult bird with its slow deep resonant double hoot.

Barking Owl
This is a threatened species in Victoria and is listed as rare. Ed has led an owl survey team for the Department of Sustainability and Environment since 1996. Many sites have been surveyed across Victoria. In recent times these owls have been found only north of the Great Dividing Range in areas that include Chiltern and along the Murray, Broken and King rivers. Their habitat is River Red Gums and Box-Ironbark. The call is a dog-like double bark with the female sound having a higher pitch than the male. These owls are the most diurnal of Australian owls and often hunt in the daytime.

The following **two** bird species do not rely on hollows:
Tawny Frogmouth
This is not an owl but has some qualities similar to owls. It is quiet in flight and nocturnal. It has large sharp talons and a powerful pointed beak for tearing meat. The call is a quiet, but constant booming sound. This species is often almost invisible if the right tree is chosen which enables the bird to avoid predators. A rudimentary nest of sticks is made.
White-throated Nightjar
This species blends well into its environment. It relies on leaf litter for camouflage which means this cover is lost when the leaf litter is destroyed by fuel reduction burning. It is very vulnerable to predators as it is ground nesting and roosting. It makes a 'beak snapping kook-kook' call. It prefers the drier hillsides of the Dandenongs to which it is a migrant.

Southern Boobook taken at Moggs Creek in January 2003
...photograph by Roy Whiteside

Australian Owlet-nightjar
This is another bird which is often difficult to see because of camouflage. It lives in hollows and makes a grating, strident churring sound.

Barn Owl
This well known bird occurs in every continent other than Antarctica. It is seldom seen in a forest situation but prefers the habitat of woodland and open farmland. It is now rare in the Dandenongs because of the large amount of built up areas where this species used to be. It does well where old River Red Gums have been retained as it likes the large tree hollows. It likes a mouse plague. Its song is a rasping screech.

Sooty Owl
Ed described this as the most beautiful owl in Australia. It is a predator which lives in the darkest forests. It has very large eyes which are adapted to these habitats. It dislikes daylight and roosts in caves or tree hollows in the darkest gullies. It is about half the weight of a Powerful Owl but has very large feet which makes it capable of taking Ringtailed Possums and Greater Gliders. Its prey is mainly taken from the forest floor in the form of rats and antechinus. The tail is short but the wing area is very large. It makes a screaming sound. It is not found in the Otways.

Masked Owl
The photograph shown was taken in the Otways in 1991 but it is also found in west Gippsland in riparian forest. This species has long wings which are more slender than the Barn Owl. The call is a raspy shriek.

Fox
A photograph and the barking call were demonstrated.

Koala
The sound of this animal was recorded at Kennett River.

Margaret Cameron gave the vote of thanks.

The Unanswered Question

...Trevor Pescott

14 Victoria Terrace, Belmont, 3216

They say that for every answer found in the study of natural history, there is a new question. Such was the case of the smelly car!

In late August a friend of mine noticed a faint but unpleasant smell in her car. A check of the likely places for something accidentally discarded, under and behind the seats, glove box, door pockets, ashtray, revealed nothing.

Next day the smell had increased, so a search under the bonnet (no neighbour's dead cat), in the boot, beneath the car (nothing caught around the tail-shaft or springs) was made... again without success.

On the third day, the odour was almost unbearable. Then a slight bulge was noticed in the lining of the roof, just near the sun-roof, and there it was ... the body of a little mouse-like animal. What kind of animal was it?

It wasn't a mouse, but something slightly larger, dark brown, short tail, carnivores' teeth—a quick check identified it as a Dusky Antechinus, a very well-developed male (the sex **is** significant).

The car had been parked beneath a pine tree near Drysdale before the smell was noticed, but—the Dusky Antechinus is a wet sclerophyll/rainforest animal and there was not a chance that it had been living on the peninsula, so where did it come from?

My friend remembered a day trip to the back of Lorne where the car was parked for a while. Clearly the antechinus was an Otway inhabitant, and since the species is often active during the day, it must have climbed into a tree and accidentally fallen. Perhaps the sun-roof had been open so it could gain access.

But now we come to the tricky part. According to all references I can find, the adult Dusky Antechinus is strictly terrestrial. What was it doing up gum-tree?

The only answer I can think of is this—
During August, Dusky Antechinuses mate. For the males, it's no time of simple courtship, consummation and happy fatherhood a little later. Stress and the breakdown of immune systems leads to death—by the end of September all the males in the population have died, leaving behind the pregnant females. Had our antechinus, in his last hours and extremely stressed, digressed from his normal habits, climbed the tree, fallen, then crept into a sheltered place to die?

That is the unanswered question in this story!

Mistletoes and Tasmania

Valda's Out and About query, why are there no mistletoes in Tasmania? (*Geelong Naturalist* 39.7) could be answered by saying—because there are no Mistletoebirds there!
But it is far more complex than that.

Mistletoebirds belong to the flower-pecker group that have their largest number of species in sub-tropical South-east Asia. Our flower-pecker, the Mistletoebird, extends further into the cool-temperate regions (e.g. the Otways) than other species of the group, but its preferred habitat is milder, more open forests and woodlands.

Tasmania and Victoria were connected at one time, but it was during a period of climatic cold and the Mistletoebird, with a preference for milder weather, may not have been present in this part of Australia then. Were mistletoes found in their present range , or did they extend their distribution as the warmer climate, and the Mistletoebird, came to Victoria after Bass Strait flooded? My guess is the latter.

Some small birds do fly across the strait to Tasmania regularly—Silvereyes certainly do—so why not Mistletoebirds, with their 'load' of mistletoe berries?

Mistletoe fruit are largely seed with a surround of nutrient-rich flesh. The Mistletoebirds swallow them whole but because of the size of the seed, and the body size of the bird, digestion is quick with the seeds voided in the droppings shortly after being eaten.

So even if a Mistletoebird did venture on a flight across Bass Strait, its load of seeds would be discharged in its droppings long before it reached Tasmania.

Some other birds also eat mistletoe berries, but only because they are an available source of food. The best known of these, the Painted Honeyeater, is a species found in drier, warmer parts of the continent.

OREN Calendar

Any member who has purchased an OREN Calendar last month should have noticed dates in October are out of sequence.

This will involve the change of the dates on three weeks.
Calendars on sale tonight have a small stick-on correction slip but it still requires the change in the figures.

OREN apologises for this error and thanks all members who continue to support the publication of the calendar.

Jerringot Report
...Valda Dedman

Spring has been a time of action. We finally installed our two new information boards, one about macroinvertebrates and the other about bats. These have been placed on either side of the bird hide. The Crakes & Rails Board, that had been badly damaged, was replaced. Mark Schirmer, the River Officer with the Corangamite Catchment Management Authority, inspected all the boards with us and gave them his seal of approval. He suggested we cover the two boards beside the cycle track with perspex. The grant money has now been fully utilised.

We have been working with the City of Greater Geelong on the weed problem. Two work crews made up of Australian Trust for Conservation Volunteers (ATCV) were organiSed. The first group 'cut and painted' the Desert Ash near the road in the north wetland, and the second group attacked the Giant Willowherb. Most of this was cut to prevent seeding, but a small section was sprayed experimentally with glysophate. Control of this pest in a wetland has to be handled sensitively to minimise damage to fauna. We are grateful to Alex Shackleton and Ned Turcinov for arranging for this work to be done. Ned consulted with the Keith Turnbull Research Institute on Giant Willowherb, but little work has been done on this weed in Australia.

The volunteers were mostly from overseas, many of them from Korea. One was from the United States and one, a keen birdwatcher, from England. They work their way voluntarily around Australia and as they go, get an insight into what is being done to help the natural environment.

The blackberry is growing again and the Council will lend us wick wipers to help control it. We also need to cut and wick the grass growing up through the floor of the bird hide and around the entrance ramp.

I met with Alex Shackleton and Rob Giddings again on Friday to walk around the Common and have input into next year's tree planting program. It is hoped to revegetate more of the edge of the golf driving range and fill in our own plantings there with shrubs. The trees would replace the wire fence damaged in the 1995 flood and not replaced. Two events are envisaged: planting with schoolchildren in Arbor Week in May and a grand Spring Planting Day in October, involving other Common groups and the general public. COGG would do the preparation work and the publicity and also provide a BBQ.

The bird hide at Jerringot is well used. I often meet people there, such as Adam Bridger, a keen bird photographer, who had just taken a great photo of a Little Grassbird. 'Badger', the supervisor of the second ATCV team, said that the group saw about 35 Latham's Snipe, which were among the Water Ribbons in the north wetland. They also saw a Nankeen Night Heron. We saw about a dozen snipe on Friday too, without even trying.

Library Notes
...Heather Cameron

We have some new acquisitions for the library:

Plant books
The Flowers of Anglesea River Valley by Mary D.White. 1989. [Donated by Leila Ramsay.]

Flora of South Australia, Part II. 2nd edn by J.M. Black. 1963. [Donated by Leila Ramsay, who also donated Parts III, IV and Supplement which we already hold in our collection.]

Bird book
Mutual ornamentation and the behavioural ecology of Black Swans by Ken Kraaijeveld. PhD, University of Melbourne, 2003.

Animal book
Gliders of Australia: a natural history by David Lindenmayer. UNSW Press, 2002. [Donated by Ian Woodland.]

Nature book
William Dampier in New Holland: Australia's first natural historian by Alex S. George. Bloomings Books, 1999. [Donated by Ian Woodland.]

Nature cassette
Nightlife of the Dandenongs: weird and wonderful sounds of night creatures, 1995. E.G. McNabb.

Mid-week Bird Group Excursion
November 20, 2003
Western You Yangs

...Polly Cutcliffe

Eleven members spent a very satisfactory morning bird-watching in the Western Plantation and along a small section of Hovells Creek. The plantation area turned up the 'find' of the morning—a Red-capped Robin. But, was it? Luckily we had some very experienced members along who realised that the call was atypical. They also noticed other subtle differences which suggested it may be a hybrid. The jury is still out. Other species recorded in the plantation include Diamond Firetail, Weebill, Spotted Pardalote, Rufous Whistler and Grey Fantail.

The walk along the creek started with a close encounter with a rather large snake which luckily was busily engaged with its head down a hole. We had wonderful sightings of Bee-eaters, White-winged Trillers, White-winged Choughs, Jacky Winter, Satin Flycatcher, Brown Treecreepers, Red-rumped Parrots, and a juvenile robin which also caused some head-scratching, but which has since been confirmed as a Flame Robin.

The dam produced Wood Duck, Grey and Chestnut Teal, Black-fronted Dotterel and Masked Lapwing.

We had a bird-count and refreshments to the accompaniment of peals of thunder, but no rain.

Sixty-three species were recorded and are listed separately.

It was good to have Margaret, Marilyn and Craig present. The sharing of their knowledge and skills (and your 'scope, Craig!) added substantially to the value of the outing.

Bird List
Australian Wood Duck
Grey Teal
Chestnut Teal
Australian White Ibis
Straw-necked Ibis
Whistling Kite
Black-fronted Dotterel
Masked Lapwing
Common Bronzewing
Galah
Sulphur-crested Cockatoo
Musk Lorikeet
Eastern Rosella
Red-rumped Parrot
Horsfield's Bronze-Cuckoo
Shining Bronze-Cuckoo
Laughing Kookaburra
Sacred Kingfisher
Rainbow Bee-eater
Brown Treecreeper (breeding)
Superb Fairy-wren
Spotted Pardalote
Striated Pardalote
Weebill
Brown Thornbill
Red Wattlebird
Yellow-faced Honeyeater
White-plumed Honeyeater
Brown-headed Honeyeater
White-naped Honey-eater
New Holland Honeyeater
Jacky Winter
Flame Robin
Eastern Yellow Robin
Crested Shrike-tit
Rufous Whistler
Grey Shrike-thrush
Satin Flycatcher
Magpie-lark
Grey Fantail
Willie Wagtail (breeding)
White-winged Triller
Olive-backed Oriole
White-browed Woodswallow
Dusky Woodswallow
Australian Magpie
Little Raven
White-winged Chough (breeding)
Skylark
House Sparrow
Red-browed Finch
Diamond Firetail
European Goldfinch
Welcome Swallow
Tree Martin
Silvereye
Common Blackbird
Common Starling

Robin—species as yet to be

Next Mid-week Bird Group Excursion
Thursday, 18 December
Inverleigh

Leader: Kay Campbell
Kay is taking us along a walking track which follows the river.

Meet: 8.30 am at Fyansford Common car park (next to the Fyansford Hotel), Hamilton Highway.

OR 9.00 am at the Inverleigh Bridge parking area on the left-hand side travelling from Geelong.

Finish: about 12.30 pm
Bring lunch if you have time to stay on for a short time.

Enquiries:
Polly Cutcliffe 5244 0182

January Excursion
Thursday, 15 January, 2004
Bald Hills area

Leader: Kay Campbell
This should be a good time of the year for trying to track down some of the specialties of this area, such as Beautiful Firetail, Tawny-crowned Honeyeater and Chestnut-rumped Heathwren (no promises!).

Meet: 8.30 am at Waurn Ponds Shopping Centre car park behind the Green Grub Nursery (now closed)

OR 9.00 am at the corner of Coalmine Road and Camp Road, Anglesea near the Alcoa roundabout.

Finish: about 12.30 pm

Enquiries:
Polly Cutcliffe 5244 0182

February Excursion
Thursday, 19 February, 2004

Details in the February *Geelong Naturalist.*

[Mud Island Trip postponed—see inside front cover for details]

Club Spring Campout at Gembrook

...Dick Southcombe

Gilwell Scout Camp proved a great base from which to explore Bunyip State Park, Kurth Kiln Park, Chambers Flora and Fauna Reserve and Mt Canninal Flora and Fauna Reserve; indeed there are fine streamside and forest walks within the camp grounds. Although we were few in number and despite heavy rain on Friday night and showers Sunday morning, we completed our program and visited some extra sites as well. The area we explored is within the West Gippsland section of the foothills of Victoria's Eastern Highlands.

We appreciated the sustained effort, dedication and guidance of the Bunyip Friends Group who we met for lunch at their Lawson Creek working-bee on Saturday and at Button-grass Track for a guided walk on Sunday; the explanatory notes they have prepared for 20 sites on this 3 km walk are excellent, a high standard has been set. At times they must find it difficult to remain dedicated to their aims when so much damage is caused by trail-bikes and horses in the area.

Of the many plants observed flowering, two shrubs to about 7 metres high were spectacular—Forest Boronia, *Boronia muelerii*, and Gully Grevillea, *Grevillea barklyana*. Forest Boronia is principally of eastern Victoria but there is another disjunct occurrence further west at Chapple Vale in the Otways; perhaps we could search for it next spring. Gully Grevillea is endemic in West Gippsland where it favours moist shaded gullies of Bunyip River tributaries.

Alison and Polly compiled a list of about 60 bird species seen or heard during the four days, but alas, not an owl despite Jim McNabb's efforts. Lyrebirds were glimpsed occasionally—they are often seen seasonally at Gilwell Park.

Jim, together with his range of equipment, arrived at camp about 4.00 pm Sunday and played a few videos showing on-the-ground and up-the-tree owl survey work carried out by a team of three—Jim, Ed and a tree-climber. This was a timely introduction to Ed's talk at our November 2nd general meeting. The videos prompted much discussion before we shared some food and drove to a known owl site in Kurth Kiln Park at dusk.

The owls didn't make themselves obvious on this occasion but we did see Greater Gliders. They have a head and body length of up to 450 mm and a tail length of up to 600 mm, their colour ranges from dark chocolate to white and they appeared to be a quite attractive animal in the canopy of Mountain Grey Gums.

We met Jim again on Monday morning and after inspecting the charcoal kilns, spent the day walking and driving to some captivating sites on streams and ridges—thank you, Jim.

We weren't permitted to visit the Helmeted Honeyeater captive breeding sites during spring, but such a visit could be arranged at an appropriate time.

A note from Margaret Rutheram... Exhibitions featuring natural history

1.
Two almost concurrent exhibitions at the Ballarat Fine Art Gallery could interest members over summer. **'Stuffed & Mounted'** ornithological collections, research and conservation items gathered to mark the centenary of Birds Australia (RAOU), is at the gallery in Lydiard Street North (near the station) until February 15.

2.
For those who love the outback, **'William Creek & Beyond'** contemporary paintings of Central Australia, are on view until February 1.

Melbourne collector David Deague funded 10 bush artists to go into the outback and produce 10 paintings each to provide a significant body of observations and work. This exhibition is the result.

Artist include John Olsen, Tim Storrier, David Larwill and Andrew Sibley.

The gallery with its beautiful extensions is worth a visit any time. Do some spot-the-birding in the early colonial and Heidelberg collections where birds were often used as a colour point or symbol.

Beforehand, a bit of birdwatching along the western shore of Lake Wendouree could prove rewarding.

3.
The Geelong Gallery has an exhibition of **Giant Trees** – ancient and historic – on also until February 15.

Bird Group Report
18 November, 2003
...John Bottomley

Grainne Maguire of the University of Melbourne was our speaker on the topic 'Behavioural Ecology of the Southern Emu-wren, *Stipiturus malachurus'*.

Grainne began her talk with a brief discussion of Emu-wren plumage which is sexually dimorphic. There are several differences in the plumage of males and females of which the most immediately obvious are the blue throat and upper breast of the males. Females in comparison have buff throat and breast feathers. Other less obvious differences include a more rufous crown in females. These differences develop very early and are present in fledged young. This makes estimating the ages of individual birds difficult.

Emu-wrens get both their common and scientific names from the nature of their tail feathers. These are long and filamentous as are the body feathers of the Emu, *Dromaius novaehollandiae*. The tail can be up to twice body length and is of little value in flight. Emu-wrens are in fact weak fliers and spend most of their time in dense vegetation where flying ability is of little value.

Habitat-wise Emu-wrens are found in a wide variety of low dense vegetation in areas below 950 metres above sea level. They are found in both temperate and sub-tropical zones. The particular type of vegetation is less important than that it be dense and structured in a particular way as Grainne explained later in her talk.

Geographicaly the Southern Emu-wren lives in the coastal zone and hinterlands of southwest Western Australia and of southeastern Australia from the Eyre Peninsula to southwestern Queensland. Several sub-species are recognised. The exact number of these has varied over time with HANZAB recognising eight. Recent genetic research suggest that several of these sub-species are genetically identical and so the number that will be recognised in the future is open to debate.

Grainne's study has two broad objectives. These are to enhance our knowledge of the general species biology of this little known bird and to inform the conservation management of the species. This latter objective if of particular importance given the threatened status of the Mt Lofty Ranges sub-species, *intermedius*, and the Eyre Peninsula sub-species, *parimeda*. Her specific aims are to determine what constitutes suitable habitat for the species, to investigate their population structure and dynamics and to describe and analyse their breeding behaviour. Towards this end she selected two field sites. One in heathland near Anglesea and the other in an area of mixed heath close to the smelter in Portland.

As was noted above, Southern Emu-wrens can be found in a wide variety of habitats. Grainne sought to determine the species mix, height, cover, density etc. of vegetation that constitutes suitable habitat. The answer to this has obvious conservation applications. Grainne outlined how she measured height structure and vegetation cover through measuring the number of times different species intersected vertical or horizontal rods and tapes at various heights. When this data was analysed it indicated that it is the structure of a vegetation complex rather than the species mix that determines its suitability as habitat for Southern Emu-wrens. They require their habitat to have a variety of distinct heights, particular levels of coverage at these heights and so on. Several weed species are destructive of suitable habitat. These include the Coast wattle, *Acacia longifolia* var. *sophorae*, Gorse, *Ulex europaeus*, Blue-Pea and Boneseed, *Chrysanthemoides monilifera*.

Grainne observed the population structure and dynamics of her study populations over the three breeding seasons of August to February 2000-2001 to 2002-2003. This involved her in netting, measuring and banding individual birds so that she could identify them throughout her study. Measurements revealed that males typically are bigger than females in all aspects except weight. In breeding pairs male birds are bigger than females. Mite loads were similar for both sexes. During the period of the study the Portland population suffered a crash during which 18 birds, 46% of the total, disappeared. This appeared to be a result of predation by feral cats whose numbers had increased as a result of fox baiting. Baiting resulted in lower fox numbers, less predation on feral cats by foxes and hence increased predation of Emu-Wrens by cats. Population numbers however recovered as birds moved in from surrounding areas to take advantage of the quality habitat of the study site. This indicates the importance of maintaining habitat continuity as such in-migration would not be possible in areas of fragmented habitat.

As noted earlier estimating the ages of birds on the basis of plumage is not practical. As such Grainne relied on identifying birds through their bands to determine their ages. The oldest, a male, was at least four years old at the end of the study period. Mean longevity is 2.5 years. Three eggs are typically laid. A third of hatched birds fail to fledge. Predation is the major cause of mortality of nestlings but on occasions parents will starve one of their chicks. At the end of the breeding season juvenile birds disperse, Of the 39 juveniles banded eight were recovered. The greatest distance from the nest was 1.2 km.

Southern Emu-Wrens maintain permanent territories the boundaries of which they mark through singing. If these borders are violated both males and females will use violence to chase away intruders. Mean territory size at Portland was one hectare with a range from 0.3 to two hectares. Territories are of irregular shapes and juveniles appear to create territories in the interstices of existing territories before taking over established territories on the death of the owners.

Southern Emu-Wrens appear to be typically lifetime monogamous although divorce does occur, usually following unsuccessful attempts at breeding. Grainne is

currently analysing genetic material taken from netted birds to determine if monogamy is as prevalent as it appears to be. If this is so it is in sharp contrast to the behaviour of Fairy-wrens which are notably promiscuous.

Courtship behaviour is limited being restricted to feeding, usually males feeding females, allopreening and wing fluttering. Nests are hard to find. 51% were in shrubs with the balance in grasses, sedges and rushes. Most are close to the ground and most face east. Eggs are laid from early to mid-August with a peak in September. Incubation takes 18 days with a further 14 days to fledging. An average of 2.7 eggs produces an average of 1.8 fledglings. Video surveillance of nests revealed that only females incubate with males visiting to feed the female who also leaves the nest to feed. Both feed nestlings with males making from 3 to 7 times as many feeeding trips as females. The main food is a variety of insects. Grainne collected the first evidence of cooperative breeding in Southern Emu-Wrens. This was more common at Angelsea, where territories were larger, and consisted of one or more males assisting in the collection of food. Nest failures resulted from a variety of causes including the death of one of the adults, predation of nestlings, often by snakes, abandonment, destruction of the nest and parasitism by a Horsfield's Bronze-Cuckoo, *Chrysococcyx basalis*.

Grainne illustrated her talk throughout with photographs and charts. She also showed selected fascinating video-clips of the feeding of nestlings.

Margaret Cameron made a short speech of thanks in which she expressed wonder at the difficulties that Grainne had overcome in studying such a shy and elusive bird. The talk was received with interest from those in attendance who showed their appreciation with a generous round of applause.

Bird Observations for November 2003

...John Bottomley

Two very unusual records this last month. Margaret Cameron and Marilyn Hewish provided them both. The first was a Sooty Albatross seen from the Lighthouse at Aireys Inlet. The second, seen a day later at Point Henry, was of an Intermediate Egret in breeding plumage. Also particularly noteworthy are the breeding records for Peregrine Falcons at Point Addis, 35 Latham's Snipe at Jerringot, 300+ Red-necked Avocets at Moolap Saltworks, the first non-coastal record of a Pacific Golden Plover from Lake Murdeduke, small winter flocks of Yellow-tailed Black-Cockatoos from throughout the region, a Chestnut-rumped Heathwren from the Brisbane Ranges, a Red-capped Robin from the You Yangs, the first large flock of Woodswallows at Mount Duneed and Zebra Finches well out of their normal range at Inverleigh Weir. Records for Olive-backed Orioles, White-winged Trillers and Rufous Songlarks indicate summer is not far off. This is the last set of observations for this year so thank you all for your submissions. Please remember that our bird of the year for 2004 is Richard's Pipit. I would appreciate receiving records for all sightings of this bird. Have a happy holiday season.

Observers were: AW, Alison Watson; Ba, Badger (see Jerringot Report); BAt, Bryant Attwood; BH, Brian Hart; CMo, Craig Morley; GMc, Gordon McCarthy; JB, John Bottomley; JCa, Jocelyn Calvert; JN, John Newman; JWi, Jan Winstanley; LPh, Lorraine Phelan; MAC, Margaret Cameron; MHe, Marilyn Hewish; PC, Polly Cutcliffe; PF, Pauline Fletcher; RGa, Rob Ganly; TFl, Tom Fletcher; VC, Vernon Cohen; VWD, Valda Dedman.

Species	Number	Date	Comments	Observer
Pink-eared Duck	1	22/10/03	Newtown. Flying south at 2015.	CMo
Sooty Albatross	1	25/10/03	Aireys Inlet lighthouse. Flying offshore. Very unusual.	MHe, MAC
Intermediate Egret	1	26/10/03	Point Henry. ALCOA sewage pond. In breeding plumage. Very unusual.	MAC, MHe
Glossy Ibis	1	13/11/03	Hospital Swamp, Baenchs Lane.	RGa
Black Kite	1	26/9/03	Lake Connewarre, Staceys Road.	TFl
	1	23/10/03	Batesford at Moorabool Viaduct.	CMo
White-bellied Sea-Eagle	1	10/10/03	Ocean Grove. Flying over. Also flew over on 13/10/03.	TFl, PF
Grey Goshawk	1	24/10/03	Bellbrae. Eating a small rabbit.	AW
Collared Sparrowhawk	1	18/9/03	Newtown. Being harrassed by an Australian Magpie.	CMo
Peregrine Falcon	5	25/10/03	Point Addis. Two adults with three young at nest. Seen regularly until 15/11/03. Two young only on 12/11/03. No birds seen on 17/11/03.	AW
	4	6/11/03	Point Addis. Two adults and two fledged young exercising their wings.	GMc
Brolga	3	8/10/03	Point Wilson, Military Swamp. A pair with a quarter grown chick.	TFl
Buff-banded Rail	1	23/10/03	Jerringot. In Golf Club car park. Very tame.	BAt
	7	23/10/01	Deakin University. A pair with 5 black downy young.	CMo, MAC
Black-tailed Native-hen	4	25/10/03	Swan Bay Jetty. One immature.	TFl, PF

Species (cont.)	Number	Date	Comments	Observer
Latham's Snipe	5	23/10/03	Jerringot.	BAt
	35	17/11/03	Jerringot. In water ribbons in the southeast corner of the north wetland.	VWD, Ba
Red-necked Avocet	300+/-	25/10/03	Moolap Saltworks. Also on 4/11/03	GMc
Pacific Golden Plover	1	2/11/03	Lake Murdeduke. All previous records have been coastal.	JN
Hooded Plover	1	17/11/03	Breamlea at mouth of Thompsons Creek.	TFl, PF
Yellow-tailed Black-Cockatoo	2	26/10/03	Brisbane Ranges, DeMotts Road. Eating pine cones in yard. First time seen at this location.	JB, JCa
	6	26/10/03	Gnarwarre. 5 on 5/11/03.	BAt
	3	30/10/03	Buckley Falls. 5 on 11/11/03.	BAt
	3	7/11/03	Waurn Ponds, Horseshoe Bend Road.	BAt
	5	8/11/03	Mount Duneed.	BAt
	1	12/11/03	Highton.	BAt
	2	18/11/03	Rokewood Cemetery. Pine trees in adjacent property.	LPh
Gang-gang Cockatoo	2	26/10/03	Bacchus Marsh. Also present in sugar gums on 27/10/03.	BAt
Little Lorikeet	2	21/9/03	Ocean Grove, Woodlands Estate.	TFl
Purple-crowned Lorikeet	2	30/10/03	Mount Duneed, Stewart Reserve.	BAt
Blue-winged Parrot	5	4/9/03	Swan Island on westside of Golf Course.	TFl, PF
	25	3/11/03	Apollo Bay. On ground feeding.	VC
	3	7/11/03	Angelsea, Forest Road.	AW
Orange-bellied Parrot	4	4/9/03	Swan Island on westside of Golf Course.	TFl, PF
Pallid Cuckoo	1	30/10/03	Mount Duneed, Stewarts Reserve.	BAt
Fan-tailed Cuckoo	1	30/10/03	Mount Duneed, Stewarts Reserve.	BAt
	3	12/11/03	Zillah Crawcour Park and Golf Course.	BAt
Sacred Kingfisher	1	22/10/03	Queens Park. Also on 24/10/03.	BAt
	1	25/10/03	Mount Duneed, Stewarts Reserve.	BAt
Chestnut-rumped Heathwren	2	12/11/03	Brisbane Ranges, Outlook Track. Likely young birds.	TFl, Pf, GMc
Spiny-cheeked Honeyeater	2	1/11/03	Mount Duneed, Stewarts Reserve. Also on 4/11/03 and 7/11/03.	BAt
Black-chinned Honeyeater	1	26/10/03	Lake Merrimu. Rare at this location.	MHe, MAC
Scarlet Robin	1	16/11/03	You Yangs, Western Paddock.	BH, PC
Red-capped Robin	1	16/11/03	You Yangs, Western Paddock.	BH, PC
Crested Shrike-tit	1	24/10/03	Zillah Crawcour Park. Also 3 on 12/11/03.	BAt
Satin Flycatcher	1	30/10/03	Mount Duneed, Stewarts Reserve. also on 1/11/03.	BAt
White-winged Triller	1	15/11/03	Mount Duneed, Stewarts Reserve. A brown bird.	BAt
Olive-backed Oriole	1	27/10/03	Queens Park.	BAt
	2	29/10/03	You Yangs, Gum Flat. Calling.	TFl, GMc
	1	30/10/03	Mount Duneed, Stewarts Reserve. Mimicking Red-rumped Parrots.	BAt
	1	7/11/03	Brisbane Ranges, DeMotts Road. Seen or heard daily.	JB, JCa
Masked Woodswallow	Hundreds.	15/11/03	Mount Duneed, Stewarts Reserve. Flying north.	BAt
	30+	15/11/03	Mount Duneed, Stewarts Reserve. Flying north with 3 White-browed Woodswallows.	BAt
White-browed Woodswallow	3	15/11/03	Mount Duneed, Stewarts Reserve. Flying north with 30+ Masked Woodswallows.	BAt
Dusky Woodswallow	2	5/11/03	Queens Park.	BAt
	Small flock.	8/11/03	You Yangs at Drysdale Road.	JWi
Zebra Finch	2	18/9/03	Inverleigh Weir.	CMo
Red-browed Finch	4	6/11/03	Queens Park. Building nests. Sitting on nests on 10/11/03.	BAt
Diamond Firetail	2	8/11/03	You Yangs at Drysdales Road.	JWi
Mistletoebird	1	27/10/03	Brisbane Ranges, DeMotts Road. A pair have been seen regularly since this date.	JB
	2	8/11/03	You Yangs at Drysdales Road. Two males.	JWi
Tree Martin	7	25/8/03	Connewarre, Lake Road.	TFl
Rufous Songlark	1	18/10/03	Werribee Plains on Bulban Road east of Edgars Road.	JB, JCa
	1	21/10/03	You Yangs, Eastern Paddock.	MHe

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Coming Events

DECEMBER 2003
TBA Challenge Bird Count
2 General Meeting: Members Night.
9 Plant Group Excursion
18 Mid-week Bird Group Excursion – Inverleigh

JANUARY 2004
17 Saturday ½ Day Excursion: Barwon River Aqueduct
Leader: Ray Baverstock
Bird Group: Team effort – 'Finding our "hard" birds'
TBA Summer Wader Count
15 Mid-week Bird Group Excursion – Bald Hills Area
17–24 Campout: Mt Kosciuszko
Leaders: Graeme Tribe & Dick Southcombe

FEBRUARY 2004
3 General Meeting: Dr Tim O'Hara –'Marine Biodiversity'
10 Plant Group: Workshop Meeting
15 Excursion: Pt Nepean National Park
Leaders: Peter & Kathy Strickland,& Diana Primrose
17 Bird Group: Marilyn Hewish – 'Freshwater Lake'
19 Mid-week Bird Group Excursion – TBA
24 Biodiversity Group: Workshop Meeting

The closing date for the next magazine will be Monday evening, 26 January, 2004.
Early lodgement of articles (small & large) would be a great help—late copy may not be accepted.
Hard copy or diskette (saved as a Word document or .rtf please) to
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The latest editions of the following references are recommended:

Birds: Christidis, L. & Boles, W. (1994) *The Taxonomy and Species of Birds of Australia and its Territories,* Royal Ornithologist Union Monograph 2, RAOU, Melbourne.
Invertebrates: CSIRO (1991) *The Insects of Australia: A Textbook for Students & Research Workers,* Vol 1 & 2, MUP, Melbourne.
Mammals: Menkhorst, P.W. (ed.) (1995) *A Field Guide to the Mammals of Australia,* Oxford University Press, South Melbourne.
Plants: Ross, J.H. (ed.) (1996) A *Census of the Vascular Plants of Victoria,* Royal Botanic Gardens of Victoria, Melbourne.
Reptiles and Amphibians: Cogger, H. (1992) *Reptiles and Amphibians of Australia,* Reed Books, Chatwood, NSW.

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Use the driveway between the big hall and the playing field.

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